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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/660,092	09/12/2000	Faroog Ullah Khan	3-53	7324
30594	7590	11/25/2003	EXAMINER	
HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 8910 RESTON, VA 20195			KADING, JOSHUA A	
			ART UNIT	PAPER NUMBER
			2661	4

DATE MAILED: 11/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.	09/660,092	Applicant(s)	KHAN ET AL.
Examiner	Joshua Kading	Art Unit	2661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

1) Responsive to communication(s) filed on \_\_\_\_\_.  
 2a) This action is FINAL.                            2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

4) Claim(s) 1-12 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_ is/are allowed.  
 6) Claim(s) 1-12 is/are rejected.  
 7) Claim(s) \_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 11 March 2002 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

13) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
 a) The translation of the foreign language provisional application has been received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

1) Notice of References Cited (PTO-892)                            4) Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)                            5) Notice of Informal Patent Application (PTO-152)  
 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.                    6) Other: \_\_\_\_\_

## DETAILED ACTION

### *Specification*

The disclosure is objected to because of the following informalities: On page 1, lines 6-10 of the Specification, applicant makes reference to a cross-referenced application. However, the serial number of the cross-referenced application was left blank.

Appropriate correction is required.

### *Claim Objections*

10       Claims 1 and 4 are objected to because of the following informalities:

Claim 1, line 3 states, "deciding which confirmation..." It should read, -- deciding which of a plurality of confirmation messages...--.

Claim 1, line 4 states, "in the received information..." It should read, --in a received information packet...-- or --in a received information message...--

15       Claim 4, line 3 states, "said received information". It should read, --said received NEW information--.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 112*

20       The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 7, lines 4-6 state, "combining received CONTINUE information with 5 previously received and decoded information; and performing a decoding operation on the combined information." It is unclear how a decoding operation can be performed on information that has already been decoded; i.e. how can the decoded received information be combined with the CONTINUE information and be decoded again? And if the CONTINUE information is not decoded, then 10 how can it be combined with already decoded information?

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this 15 Office action:

A person shall be entitled to a patent unless –  
(b) the invention was patented or described in a printed publication in this or a foreign country or in 20 public use or on sale in this country, more than one year prior to the date of application for patent in the United States.  
Claims 8 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Crisler et al. (U.S. Patent 5,477,550).

In regard to claim 8, Crisler et al. disclose "a method for ARQ using 25 Incremental Redundancy, the method comprises:

transmitting a positive confirmation message after having received CONTINUE information while waiting for NEW information, or after having successfully decoded received NEW information while waiting for either NEW or

CONTINUE information, or after having successfully decoded combined

5 CONTINUE information after having waited for CONTINUE information (col. 3, lines 9-14 where the ACK message is the positive confirmation message which is sent after "having successfully decoded received NEW information while waiting for either NEW or CONTINUE information")."

10 In regard to claim 9, Crisler et al. disclose "the method of claim 8 further comprising the step of transmitting a negative confirmation message after any of the received information was unsuccessfully decoded (col. 4, lines 36-46 where the partially-received communication is the negative confirmation message and the errors are detected by the decoding step as can be read in col. 4, lines 23-

15 28)."

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

20 (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

25

Claims 1-6 and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crisler et al. in view of MacDonald et al. (U.S. Patent 5,537,416).

5 In regard to claim 1, Crisler et al. disclose "a method for receiving information in a communication system that user ARQ with IR, the method comprises the step of:

deciding which [of a plurality of] confirmation message[s] to transmit based on... a decoding operation performed on the received information... (col. 4, lines 10 23-46 where the error detection is a decoding operation performed on the received information and then the appropriate confirmation message is sent based on the decoding results)."

However, Crisler et al. lack "deciding which [of a plurality of] confirmation message[s] to transmit based on an information status flag indication contained

15 in [a] received information [message]..." MacDonald et al. however, disclose "deciding which [of a plurality of] confirmation message[s] to transmit based on an information status flag indication contained in [a] received information [message]... (col. 2, lines 26-33 where the information block is the same as the received information message and the Repeat Flag is the status flag used to aid 20 in deciding which confirmation message to send)"

It would have been obvious to one with ordinary skill in the art at the time of invention to include the status flag with the decoding for the purpose of

knowing if the message is repeated or new. The motivation being correct sequencing of the message for further transmitting or processing.

In regard to claim 2, Crisler et al. and MacDonald et al. disclose the method of 5 claim 1. However, MacDonald et al. lack "the step of deciding which confirmation message to transmit comprises waiting for NEW information." Crisler et al. however, further disclose "the step of deciding which confirmation message to transmit comprises waiting for NEW information (col. 4, lines 23-28 where waiting for all messages to be received before deciding which confirmation message to 10 transmit is waiting for NEW information as none of the messages have been received previously or are retransmits)." It would have been obvious to one with ordinary skill in the art at the time of invention to include the waiting for NEW information with the method of claim 1 for the same reasons and motivation as in claim 1.

15

In regard to claim 3, Crisler et al. and MacDonald et al. disclose the method of claim 1. However, MacDonald et al. lack "waiting for NEW information after a positive confirmation message was transmitted." Crisler et al. however, further disclose "waiting for NEW information after a positive confirmation 20 message was transmitted (figure 6 where after the positive confirmation message is sent (601) the message is unbuffered and the receiver awaits a NEW information to begin the process again)." It would have been obvious to one with ordinary skill in the art at the time of invention to include the waiting for NEW

information with the method of claim 1 for the same reasons and motivation as in claim 1.

In regard to claim 4, Crisler et al. and MacDonald et al. disclose the 5 method of claim 1. However, MacDonald et al. lack "transmitting a positive confirmation message after receiving NEW information while waiting for either NEW or CONTINUE information, decoding said received [NEW] information successfully and discarding any previously received information."

Crisler et al. however, further disclose "transmitting a positive confirmation 10 message after receiving NEW information while waiting for either NEW or CONTINUE information (figure 6 where after the positive confirmation message is sent (601) the message is unbuffered and the receiver awaits a NEW information to begin the process again), decoding said received [NEW] information successfully and discarding any previously received information (col. 15 5, lines 36-40 where the transmission acknowledgement is the positive confirmation message and the unbuffering can be considered discarding previously received information)."

It would have been obvious to one with ordinary skill in the art at the time of invention to include the transmitting positive confirmation after receiving NEW 20 information with the method of claim 1 for the same reasons and motivation as in claim 1.

In regard to claim 5, Crisler et al. and MacDonald et al. disclose the method of claim 1. However, MacDonald et al. lack "transmitting a positive confirmation message if the received information is NEW information and the decoding operation was successful." Crisler et al. however, further disclose

5 "transmitting a positive confirmation message if the received information is NEW information and the decoding operation was successful (col. 4, lines 23-46 where the error detection is a decoding operation performed on the received information and the information being received is taken to be NEW information since it is not being sent in response to a negative acknowledgement; and a message-received

10 communication or positive acknowledgement is sent if the decoding is successful, that is there were no errors)." It would have been obvious to one with ordinary skill in the art at the time of invention to include the transmitting a positive confirmation message if the received information is NEW and decoding is successful with the method of claim 1 for the same reasons and motivation as

15 in claim 1.

In regard to claim 6, Crisler et al. and MacDonald et al. disclose the method of claim 1. However, MacDonald et al. lack "transmitting a negative confirmation message if the received information is NEW information and the decoding operation was unsuccessful." Crisler et al. however, further disclose

20 "transmitting a negative confirmation message if the received information is NEW information and the decoding operation was unsuccessful (col. 4, lines 23-46 where the error detection is a decoding operation performed on the received

information and the information being received is taken to be NEW information since it is not being sent in response to a negative acknowledgement; and a message-partially-received or negative acknowledgement is sent if the decoding is unsuccessful, that is there were errors)." It would have been obvious to one

5 with ordinary skill in the art at the time of invention to include the transmitting a negative confirmation message if the received information is NEW and decoding is unsuccessful with the method of claim 1 for the same reasons and motivation as in claim 1.

10 In regard to claim 10, Crisler et al. disclose "the method of claim 8 where the received information is formatted as one or more sub-packets... (col. 3, lines 1-3 where the smaller fixed-length blocks represent sub-packets)." However, Crisler et al. lack "...where each sub-packet contains a one-bit information status flag defining the packet as either NEW or CONTINUE." MacDonald et al.

15 however, disclose "...where each sub-packet contains a one-bit information status flag defining the packet as either NEW or CONTINUE (col. 2, lines 26-33 where the information block is the same as the received information message and the Repeat Flag is the status flag used to identify the packet as either NEW (not a repeat packet) or CONTINUE (a repeat packet))." It would have been

20 obvious to one with ordinary skill in the art at the time of invention to include the status flag with the method of claim 8 for the purpose of knowing if the message is repeated or new. The motivation being correct sequencing of the message for further transmitting or processing.

In regard to claim 11, Crisler et al. and MacDonald et al. disclose the method of claim 10. However, Crisler et al. lack "the information status flag is stored in each packet's header." MacDonald et al. however, further disclose "the 5 information status flag is stored in each packet's header (figure 3, where RF is the repeat flag and is contained in the header (non-data) part of the packet)." It would have been obvious to one with ordinary skill in the art at the time of invention to include the status flag in the header with the method of claim 10 for the same reasons and motivation as in claim 10.

10

In regard to claim 12, Crisler et al. disclose "the method of claim 8 where the received NEW or CONTINUE information comprises a plurality of packets... ( col. 3, lines 1-3 where the smaller fixed-length blocks represent sub-packets)." However, Crisler et al. lack "...where each packet has a header, a 15 payload, and a trailer and where a one-bit NEW/CONTINUE flag is stored in the header." MacDonald et al. however, disclose "the received NEW or CONTINUE information comprises a plurality of packets where each packet has a header, a payload, and a trailer and where a one-bit NEW/CONTINUE flag is stored in the header (figure 3, where RF is the repeat flag and is contained in the header (non- 20 data) part of the packet, the DATA is the payload, and the CHK field is the trailer)." It would have been obvious to one with ordinary skill in the art at the time of invention to include the header, payload, and trailer with the method of claim 8

for the purpose of routing the packet to the appropriate destination and error checking. The motivation being correct routing of the messages.

Any inquiry concerning this communication or earlier communications from  
5 the examiner should be directed to Joshua Kading whose telephone number is  
(703) 305-0342. The examiner can normally be reached on M-F: 8:30AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas Olms can be reached on (703) 305-4703. The fax phone number for the organization where this application or proceeding is  
10 assigned is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

  
Joshua Kading  
Examiner  
Art Unit 2661

15

  
JK  
November 18, 2003

  
KENNETH VANDERVUYSE  
PRIMARY EXAMINER